THE EFFECT OF DIABETES ON FUNCTIONAL OUTCOMES AMONG INDIVIDUALS WITH DISTAL RADIAL FRACTURES

Sanaa Alsubheen a, D Walton a, JC MacDermid a,b and R Grewal a,b

aUniversity of Western Ontario, Canada
bSt. Joseph’s Health Centre, Canada

Purpose: This study investigated the effect of diabetes on pain, hand function, physical health status, grip strength, wrist and forearm ROM among patients with distal radial fractures (DRFs).

Material and Methods: A prospective cohort study assessed a total of 479 patients with DRFs. Patients were classified into patients with diabetes and patients without diabetes groups based on self-report. Pain and hand function were assessed using Patient Rated Wrist Evaluation (PRWE) questionnaire. The SF-12 questionnaire was used to assess physical health status. Both questionnaires examined DRFs recovery at baseline, 3-month (3m), and at 1-year (1y). Grip strength, wrist and forearm ROMs were measured using N-K computerized hand evaluation system at 3m and 1y.

Results: Results revealed a significant improvement in PRWE scores over time (69±19 to 25±22; 76±15 to 20±20 for patients with and without diabetes respectively, p < 0.01) with a significant interaction between time and diabetes (p < 0.01); indicating that diabetic patients recovered more slowly than the rest of the cohort. There was improvement over time on physical health status (36±12 to 45±12; 39±9 to 50±9, p < 0.01), grip strength (16±7 to 24±10; 15±9 to 24±10, p < 0.01), and ROMs (flexion (42±14 to 49±15; 43±15 to 54±14, p < 0.01), extension (45±11to 52±11; 46±13 to 53±12, p < 0.01), pronation (73±10 to 77±9; 73±11 to 78±9, p < 0.01), and supination (58±17 to 65±14; 61±17 to 70±12, p < 0.01) for patients with and without diabetes, respectively. Despite the insignificant interaction between diabetes and time on these secondary outcomes; diabetic patients had poorer physical health status and less ROMs at 1-year time point.

Conclusion: Diabetes is associated with greater pain, hand disability, and poorer physical health status; and slower recovery after DRFs.

Biography

S Alsubheen is a PhD candidate at School of Physical Therapy, University of Western Ontario, Canada. She has a masters degree in Kinesiology from Memorial University, Newfoundland, Canada.

salsubah@uwo.ca

Notes: